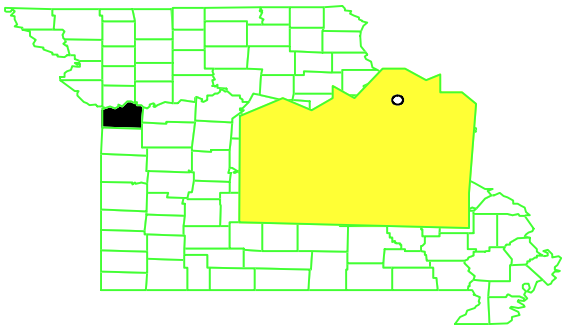
LAKE CITY ARMY AMMUNITION PLANT LAGOON)

MISSOURI
EPA ID# MO3213890012

EPA Region 7
City: Independence
County: Jackson County
Other Names:



SITE DESCRIPTION

The Lake City Army Ammunition Plant (LCAAP) is a 4,000 acre facility that has manufactured, stored, and tested small arms ammunition continuously since 1941, except for a five year period following World War II. LCAAP has relied heavily on lagoons, landfills, and burn pits for waste disposal. Industrial operations have generated large quantities of potentially hazardous waste including oils, greases, solvents, explosives, radionuclides, and metals. LCAAP's water treatment plant provides water for industrial use and for consumption by plant personnel from 13 production wells on-site. Adjacent to the northern boundary of the site is Lake City, with a population of approximately 50 people. Private residences off site use groundwater from private wells. The Missouri River and Little Blue River, located near the site, are used for recreational activities.

Site Responsibility:

This site is being addressed by the Army with oversight provided by EPA and the state of Missouri.

NPL LISTING HISTORY

Proposed Date:	10/15/84
Final Date:	07/22/87
Deleted Date:	

THREATS AND CONTAMINANTS

Groundwater beneath the site, soil, and surface water are contaminated with volatile organic compounds (VOCs), various explosives, and heavy metals including lead, arsenic, and chromium from former waste disposal practices. Potential threats exist for those who have direct contact with or ingest untreated groundwater, surface water, or soil. The LCAAP uses treated groundwater from the site to provide drinking and process water for plant operations. VOC-contaminated groundwater appears to have migrated off-plant, to the north of LCAAP from the northeast corner. The Army is attempting to gain access to off-site properties to determine the extent of the contamination.

CLEANUP APPROACH

Response Action Status

Immediate Actions: Air strippers were installed in the plant's drinking water supply facilities to remove volatile contaminants before reaching the LCAAP water treatment plant. LCAAP is also continuing to monitor groundwater contaminant migration through a regular sampling program.

Installation-Wide Area: The Army initiated an investigation in 1987 to determine the extent and type of contamination on site and to identify alternative technologies for the cleanup. The study confirmed contamination of the groundwater in various areas at LCAAP and identified several potential source areas. In 1991, the investigation was expanded, identifying additional source areas for which fieldwork was completed in 1992. Groundwater monitoring, initiated in 1994, is continuing. Additional plant-wide groundwater sampling using the Army COE SCAPS equipment was conducted in mid-1998. Sampling did not indicate the presence of VOCs in groundwater which would be migrating beyond LCAAP boundaries, aside from the Northeast Corner. A removal action is currently planned to utilize existing LCAAP water supply wells to contain groundwater contamination within the LCAAP. Sampling of Area 8 has identified soil and groundwater contamination. In early 1996, the Army completed an interim cleanup action at Area 8 to construct a soil cover on open waste lagoons. The Army is in the process of addressing depleted-uranium contamination at the Area 10 Firing range site under CERCLA and the FFA. Area 10 had previously been addressed pursuant to an NRC Recommissioning Plan, however, based on request from the Army, it will be addressed comprehensively under CERCLA in the future.

Area 18: Previous environmental data from the installation-wide site investigation indicate this site has contaminated soil and groundwater. An investigation of Area 18, completed in 1992, provided additional information needed to determine the nature and extent of contamination. Installation of a groundwater extraction well and treatment plant was completed in early 1997. This system ensures that VOC-contaminated groundwater from this area of the LCAAP does not migrate

off-plant. This pump and treat system began operation in early 1997 and is currently operational. The ROD for cleanup of the source area in Area 18 was signed in April 1999. In addition to groundwater cleanup via pump and treat, the ROD specifies multi-phase vapor extraction to address VOC source areas. The design of the system has been put on hold following a dispute, the result of which is to reexamine alternatives for this remedial action.

Northeast Corner: The Army initiated an investigation in 1990 to determine the extent and type of contamination present in the northeastern corner. Additional groundwater sampling in the fall of 1996 detected groundwater contamination from the Northeast Corner at the northern LCAAP boundary. The Army installed an extraction well in the center of this plume on LCAAP property in early 1998 to eliminate potential migration of contaminated groundwater off-plant from the Northeast Corner. Further sampling to determine the extent of existing off-plant contamination will begin after the Army negotiates access agreements with adjacent landowners. The installation of a permeable reactive wall in the Northeast Corner as an early response action to address groundwater contamination began in the summer of 2000. Construction of the wall is nearly complete, subject to resolution of several minor issues.

Site Facts: The plant is participating in the Installation Restoration Program, a specially funded program established by the DOD in 1978 to identify, investigate, and control the migration of hazardous contaminants at military and other DOD facilities. A Federal Facility Agreement (FFA) between the EPA, the Army, and the State of Missouri was signed in 1989, covering the investigative, design, and cleanup activities throughout the installation.

ENVIRONMENTAL PROGRESS

The execution of early response actions has reduced the potential for exposure to hazardous substances at the Lake City Army Ammunition Plant site while further investigations leading to final cleanup activities are taking place. A pump and treat system to contain contaminated groundwater on-site at Area 18 began operations in the spring of 1997. An additional pump and treat system became operational in the Northeast Corner in early 1998 to prevent migration of contaminated groundwater off-site. The installation of a permeable reactive wall to further reduce potential migration of contaminated groundwater from the Northeast Corner was initiated in the summer of 2000.

SITE REPOSITORY

Mid-Continent Public Library-South, Blue Springs, MO Lake City Army Ammunition Plant, Independence, MO

Superfund Records Center
901 N. 5th St.
Kansas City, KS 66101
Mail Stop SUPR
(913)551-4038

REGIONAL CONTACTS

SITE MANAGER: Scott Marquess
E-MAIL ADDRESS: marquess.scott@epa.gov
(913) 551-7131

COMMUNITY INVOLVEMENT COORDINATOR:
PHONE NUMBER:

PUBLIC INFORMATION CENTER:
E-MAIL ADDRESS:

STATE CONTACT:
PHONE NUMBER:

MISCELLANEOUS INFORMATION

STATE: MO

CONGRESSIONAL DISTRICT: 05

EPA ORGANIZATION: SFD-SUPR/FFSE

MODIFICATIONS